



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,998	04/02/2001	Richard Gilles	ESSR:039US	1742

7590 11/04/2004

Mark B. Wilson  
Fulbright & Jaworski L.L.P.  
Suite 2400  
600 Congress Avenue  
Austin, TX 78701

EXAMINER
----------

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/824,998

Applicant(s)

GILLES ET AL.

Examiner

Tatyana Zalukaeva

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1713

***Response to Amendment***

1. The finality of the previous office action is withdrawn, since the art rejection of claims 25-27 has not been previously presented.

2. In response to applicant's Amendment regarding the last Office action, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of the present communication.

3. Claims 1-27 have been cancelled. New claims 28-47 are presented.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 28-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al (U.S. 5,183,870).

The disclosure of Fukushima reads on the instant claims as follows:

Fukushima discloses a polymerizable composition comprising

(A) 10 to 60 parts by weight of a polybutylene glycol di(meth)acrylate represented by the general formula (I): (abstract)



(B) 20 to 80 parts by weight of a specific **urethane poly(meth)acrylate or epoxy poly(meth)acrylate,**

Art Unit: 1713

(C) 5 to 60 parts by weight of a specific mono(meth)acrylate, presented by the structures (II)-(V) in a paragraph bridging columns 2 and 3. and

(D) 0 to 60 parts by weight of a compound having at least one polymerizable double bond in the molecule, wherein the total amount of (A), (B), (C), and (D) being 100 parts by weight. (abstract).

The compound (B) constituting the second component is used to improve the thermal resistance of the resulting lenses, because lenses formed by using only the polybutylene di(meth)acrylate (A) constituting the first component will fail to have satisfactory thermal resistance (column 4, lines 12-17).

Useful urethane poly(meth)acrylates having two or more (meth)acryloyloxy groups in the molecule, which can be used as the compound (B), include products obtained by the urethane-forming reaction of a (meth)acrylate containing a hydroxyl group with a polyisocyanate having two or more isocyanate groups in the molecule (col. 4, lines 18-25). Suitable methacrylates and isocyanates are presented in col. 4, lines 26-55. These monomers are readable on the monomers (II) of the instant claims. With regard to component (C) of Fukushima, the specific examples of these compounds are presented in columns 7, 8 and 9 up to line 50. Examples of component (D) are presented in col. 11, lines 27-33, and are cyclic or polycyclic aromatic compounds having Methacrylate functionality. The refractive index of Fukushima's polymers is presented in Table 1, col. 14, and is within the claimed range.

Art Unit: 1713

The disclosure of Fukushima differs from the instant claims by **disclosing butyleneoxy group versus propyleneoxy group**, as moiety A in claim 28. However, propylene and butylenes radicals are closest homologs (compounds that differ by only one  $-CH_2$  group). However, structural similarities have been found to support a prima facie case of obviousness. See, e.g.; In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologs and structural isomers); Generally, some teaching of a structural similarity will be necessary to suggest selection of the claimed species or subgenus. Therefore, lacking showing criticality of having propyleneoxy group, as moiety A, vs. butyleneoxy group of the reference on this record, a person skilled in the art would have reasonably expected functional similarities between the products of Fukushima and instant polymers based on the structural similarities, as discussed above.

#### ***Terminal Disclaimer***

6. The terminal disclaimer filed on 09/29/2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,677,420 has been reviewed and is accepted. The terminal disclaimer has been recorded.

#### ***Response to Arguments***

1. Applicant's arguments filed 11/17/2003 have been fully considered but they are not persuasive. Applicants argue that "...in an attempt to supplement the deficient

teachings of Fukushima et al., the Action states that propylene and **butylene groups are close homologs**. From this, the Action reasons that in the absence of any demonstration of the criticality of the use of propyleneoxy, a person of ordinary skill in the art would have reasonably expected functional similarities between the products of Fukushima and (the) instant polymers . . . . Interestingly, the Action fails to present any evidence (either extrinsic or intrinsic) to support such a contention.”

Applicants further present *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), analysis and conclude that there is no motivation to modify the reference to Fukushima to arrive at the instant invention.

In response to this, Applicants’ attention is respectfully drawn to several sections of MPEP 2144, 2144.08, 2144.09, wherein explicitly stated that a) any teachings of a “typical,” “preferred,” or “optimum” species or subgenus within the disclosed genus. If such a species or subgenus is structurally similar to that claimed, its disclosure may motivate one of ordinary skill in the art to choose the claimed species or subgenus from the genus, based on the reasonable expectation that **structurally similar species usually have similar properties**. See, e.g., Dillon, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also Deuel, 51 F.3d at 1558, 34 USPQ2d at 1214 : Structural relationships may provide the **requisite motivation or suggestion to modify known compounds to obtain new compounds**. For example, a prior art compound may suggest its **homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties.**

The closer the physical and chemical similarities between the claimed species or subgenus and any exemplary species or subgenus disclosed in the prior art, the greater the expectation that the claimed subject matter will function in an equivalent manner to the genus. See, e.g., Dillon, 919 F.2d at 696, 16 USPQ2d at 1904 (and cases cited therein). In short, structural similarities have been found to support a prima facie case of obviousness. See, e.g., In re May, 574 F.2d 1082, 1093-95, 197 USPQ 601, 610-11 (CCPA 1978) (stereoisomers); In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologs! (like in the instant case) and structural isomers); In re Hoch, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (CCPA 1970) (acid and ethylester); In re Druey, 319 F.2d 237, 240, 138 USPQ 39, 41 (CCPA 1963) (omission of methyl group from pyrazole ring).

It is further expressly stated in MPEP that , obviousness does not require absolute predictability, **only a reasonable expectation of success, i.e., a reasonable expectation of obtaining similar properties.** See, e.g., In re O 'Farrell, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) **or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH2-groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties.** In re Wilder, 563 F.2d 457, 195USPQ 426 (CCPA 1977)

**Homology** and isomerism involve close structural similarity which must be considered

Art Unit: 1713

with all other relevant facts in determining the issue of obviousness. In re Mills, 281 F.2d 218, 126 USPQ 513 (CCPA 1960);

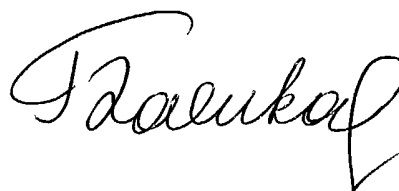
Therefore, since the Examiner has established prima facie case of obviousness, the burden was shifting to Applicants to come forward with rebuttal evidence, Applicants have not presented any evidence on this record on how two closest homologs behave or render different properties, and therefore, rejection is sustained for new claims 28-47 on the same basis as was made for the initially presented claims 1-24, wherein claims 25-27 were inadvertently omitted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva

A handwritten signature in black ink, appearing to read 'T. Zalukaeva', with a stylized flourish at the end.



Application/Control Number: 09/824,998  
Art Unit: 1713

Page 8

Primary Examiner  
Art Unit 1713

October 28, 2004